

Genesis

Set up guide for The Genesis 700 Loudspeaker

Introduction

While many companies have rushed to fill the growing home theater market with quick redesigns of existing products, a few companies have taken their time to do it right. Our goal in the design of both a high end music and home theater product was to set a new standard of performance for **both** music and video - a benchmark for the industry. After two years of designing, listening and redesigning, we believe that we have achieved our goal in the Genesis 700 loudspeaker.

Based on some of the same technology found in our \$90,000 Genesis One reference system, the 700 is a musically accurately dipole design in the tradition of all Genesis reference loudspeakers. So honest is this speaker's performance that the 700 is equally at home in the finest music systems as in home theater applications. Used alone or in conjunction with the Genesis 900 subwoofer system, the 700 can create a life-like holographic representation of either music or video sound.

The 700 can be used in either a horizontal position as a center channel, or in a vertical mounting on either stands or wall mounts as the front, rear or main channels in a music or home theater system.

The Genesis 700 is a completely shielded loudspeaker. This allows reasonably close placement of the speaker to a television set without any visual distortion of the television picture. This feature is not important if you have a rear screen or front screen projector television.

Because every room and listening situation is different it is not possible to design a loudspeaker that is perfect for every application. Realizing this, Genesis has continued with our tradition of offering you complete flexibility. In the rear of the 700, there are two controls, one for the tweeter level and one for music or video. The tweeter level control allows you to adjust the volume of the tweeter to perfectly match your tastes and your system. The music/video switch in the rear of the 700 allows the bass contour to be optimized for either application.

Our design goals for the 700 included broad dynamic range, full frequency response and excellent off axis performance.

The Genesis 700 has exceptional dynamic range for a speaker of its size. The 700 is capable of easily handling several hundred watts of power and producing SPL levels approaching that of live music.

With a frequency response essentially flat from 48 Hz to 36 kHz, the 700 is a full range loudspeaker for all but the lowest frequencies which, if necessary, can be augmented with the addition of a Genesis 900 subwoofer.

Attaching the logo to the grille

The Genesis logo (metal nameplate) has been supplied with each Genesis 700. It has been placed in a small box for its protection and should be taped to the outside of the carton you received from your dealer (this is actually the inside carton when shipped).

The logo was not pre-assembled to your grille so it can be placed in the proper orientation (horizontal or vertical) after you have chosen the position of the Genesis 700.

Each grille has two areas to mount the logo. One is for horizontal mounting and the other is for vertical mounting. Looking at the back side of the grille, you will notice two larger areas in the grille's wooden frame. Each of these areas has been machined to hold the grille.

After locating the area to mount the logo to, and after deciding which direction the speaker will be positioned (horizontal or vertical), place the grille on a hard surface such as a table. Place something underneath the area that you are going to mount the logo (such as a thin book). The logo has two pins that protrude out of its back. Place these on the grille cloth until you feel the two mounting holes underneath the cloth. Press hard on the logo so that the two pins on the back of the logo fit into the holes. It may be necessary to lightly tap the logo in place with a rubber mallet or the palm of your hand.

Positioning the 700 for video

If your primary usage of the 700 is in a video system, we recommend you follow this setup guide.

The Genesis 700 can be mounted in a number of different ways. Placed on top of the television or below the television in a horizontal manner, the 700 becomes a high-end center channel. Placed in the vertical position on either stands or affixed to the wall with an adjustable wall mount bracket, the 700 becomes a high-end left, right, center or surround speaker. In fact, the Genesis 700 was designed to be a complete home theater system.

Stand mount

If you are planning on using stands to vertically mount the Genesis 700, we recommend that you keep the tweeter (the small driver in the middle) at approximately ear level when seated. Stand height to accomplish this is typically 20 to 25 inches high. The tweeter is located 11 inches from the bottom of the loudspeaker.

Wall mount

If you plan on wall mounting the Genesis 700, we recommend that you purchase a wall mount bracket capable of safely holding 60 pounds or more (approximately 27 kilos). We further recommend that you affix the wall mount bracket to a stud or supporting beam within the wall. **Do not rely on drywall, wallboard or thin wall material to support the Genesis 700.** The cabinet on the Genesis 700 is 1 inch thick material. We recommend that you use a minimum of 1.25 inch long wood screws above the rear plate of the Genesis 700 to affix the wall mount to the speaker. Do not use wood screws longer than 2 inches in length. **Do not screw anything into the side of the speaker, only the rear panel.**

We recommend that you purchase a wall mount bracket capable of rotational adjustment of the loudspeaker because it is acoustically important that you point the tweeter (the center of the loudspeaker) at your approximate listening (viewing) position. By pointing the speaker at your listening position, it is possible to mount the Genesis 700 as high as eight feet from the floor.

Center channel placement

If you plan on utilizing the Genesis 700 as a center channel speaker, you may mount it vertically on either a stand or attached to the wall. If you wish to place the Genesis 700 on the floor (in front of the television) or on top of the television in a horizontal manner, we recommend that you angle the loudspeaker in such a way that the tweeter (center of the speaker) points at your approximate listening (viewing) position.

Surround placement

You may use either wall mount or stand mount, vertical or horizontal positioning for the surround speakers. Vertical orientation is recommended. Surround channels are typically placed to the sides of the room, one on the left and one on the right. They can be placed behind the listener if so desired. We recommend that you position the speakers in such a way that they point at the approximate listening (viewing) position.

Positioning the 700 for Music

If your primary usage of the 700 is in a music system, we recommend you follow this setup guide.

We suggest that you stand mount the Genesis 700. A sturdy, non-resonant stand would be strongly recommended. Once stand mounted, we recommend that you keep the tweeter (the small driver in the middle) at approximately ear level when seated.

Stand height to accomplish this is typically 20 to 25 inches high. The tweeter is located 11 inches from the bottom of the loudspeaker.

Set the speakers approximately where you want them in the room. We recommend that the loudspeakers be placed so they fire into the long dimension of the room. As measured from the wall behind the loudspeakers, we suggest placing your Genesis 700's about 20% into the room. Example: if the length of the room is twenty feet (seven and three quarter meters) the 700's should be about four feet (1.2 meters) from the wall behind them.

Typical distances between the two speakers are six to seven feet (approximately two and a half meters). Typical distance to sit away from the speaker is eight to nine feet (three and a half meters).

We suggest you toe in the speakers. This means that you should angle the speakers towards the listener. Point them directly at your listening position. This will help focus the center image.

After positioning your Genesis 700, connect to your power amplifier

Use a high quality speaker cable to connect your power amplifier with the set of binding posts on the back of the Genesis 700. Hook up your power amplifier. Make sure that you maintain proper polarity. This means that the plus (+) terminal of your amplifier **must** be connected to the plus (+/red) terminal on the back of the Genesis 700. You will notice two controls on the back of the speaker next to where you connected the speaker cables. There is a volume control for the front tweeter and a switch marked "Music" or "Video".

Tweeter level control

Turning this control clockwise will increase the level of the front tweeter. Use this control if you need a bit more treble (high frequencies). Start with this control at the one o'clock position.

Music Video Switch

On the back of the Genesis 700, there is a switch marked "music" or "video". This switch changes the low bass contour of the speaker so as to more accurately reflect the sonic requirements of each medium. Select the appropriate position for your application.

At this point, you are ready to play the system.

Roughing the Video system in

We recommend that you follow closely the instructions of your dealer and the instructions that accompany your particular surround sound decoder. There are a

number of different surround mediums that you may be using (AC3, THX, DTS, Dolby Pro Logic etc.) so it is rather difficult to recommend a method to rough the system in.

Roughing the music system in

We will attempt to create a natural and life-like audio presentation, by proper placement of the Genesis 700's in the room. To accomplish this, we suggest that you start with a single vocal with instrumental accompaniment as many people find the sound of the human voice more easily recognizable and therefore easier to identify as sounding natural and life-like.

1. If the vocal appears to be larger than life, you should first check the system volume. Is it a volume that would be appropriate for someone actually singing in your room? If there is too much volume the artist will appear too big and the opposite is true for too little volume. If the volume is set correctly and the image is still too big, toe the speakers in a little more or place them closer together and re-listen. Repeat this process till you have it right.

2. If you are not getting enough front to back depth (the sound should appear to be coming from behind the loudspeaker) pull the speakers **away** from the wall a little bit at a time (closer to the listening position). If you do not have them pulled far enough away, you may not have enough front to back depth. Find the best compromise for your room, your tastes and your space requirements.

3. If you are not getting proper focus on the voice, you may place the left and right speaker closer together or add a small amount of toe in until you have a properly defined center image. If the speakers are too far apart you will lose the side image and if they are too close together, or have too much toe in, you will have too small a center stage. We recommend you begin with six to seven feet apart as measured from tweeter to tweeter.

When properly set up very little sound should appear to come directly from the speaker, instead, the sound stage should extend far beyond the left and right edge of the loudspeakers and they should have tremendous front to back depth. When the recording is close miked (when the instrument or performer is very close to the recording microphone) the music may appear to come directly from the loudspeaker. This is normal. Typically, however, the sound should appear to be detached from the loudspeakers.

In summary, focus will be achieved by placing the speakers closer together or farther apart, and also by varying the amount of toe in and front to back depth can be adjusted by the distance from the rear of the speaker and the wall.

The Refinement stage

After following the rough setup guide above, your speakers should sound great. However a little more work over a period of time can put the finishing touch on your system. To help in this goal we share with you here some of our observations in setting up Genesis loudspeakers.

Note: One guideline we suggest you keep in mind is to make only one change at a time! Make each change separately and note the difference - by listening - with each adjustment. One of the biggest mistakes we find customers making is too many changes at once. Make one change, then listen.

1. A common problem we find with many setups is a tendency to separate the speakers too far from each other. This gives an unnaturally wide soundstage **between** the two speakers, and creates problems beyond the unnatural width of the center stage. The key problem is a lack of soundstage information **beyond** the left and right sides of the speakers. Another is improper focus of instruments and voices which is typically "corrected" by the user with too much toe in. Yet another problem is a lack of mid bass energy. In order for the appropriate amount of mid bass energy to be present, the speakers should be close enough together to achieve proper acoustic "coupling" of the woofers. Coupling is desirable in the lower frequencies and simply means that the left and right drivers "work together" as opposed to working separately.

In order to achieve what the speaker is capable of we suggest you focus your efforts on a proper **balance** of soundstage elements that includes information beyond the left and right sides of the speakers, front to back depth well behind the speaker, excellent focus of instruments and voices with proper vertical information and mid bass fill.

A Genesis loudspeaker system correctly set up, can and should provide a soundstage that is wall to wall and with pinpoint focus, the speakers disappearing completely on a recording containing such information.

2. **Not enough depth.** If you find that the sound is not spacious enough or you are not getting enough front to back depth, pull the speaker away from the wall behind the loudspeaker (closer to the listening position). This is typically preferable to separating the two speakers too far and will almost always give you better depth and soundstage information. A word of caution, however, if you move the speaker too far from the wall you may lose focus or deep bass.

3. **Not enough bass.** If you find there isn't enough deep bass, your remedy is to move the speakers farther from you (closer to the wall behind them). This will increase the coupling of the woofers to the room. Do this procedure in small increments (approximately one inch at a time) and return often to the recordings you have used to adjust the front to back depth and soundstage properties of your system. It is easy, yet unproductive, to go too far in one direction. One word of caution, never place the speakers closer than one foot to the wall except for rear channel (surround) video applications.

A good balance between proper low bass extension and a deep and spacious soundstage needs to be established to optimize your new speaker's performance.

It may be advisable in medium to large rooms to augment the bass with one or two Genesis 900 subwoofers. This approach will extend the apparent range of the Genesis 700 from 48 Hz to 16 Hz.

Room Treatment

No room is perfect. To optimize your sonic presentation it may be helpful to treat your room. Here are some guidelines;

1. This loudspeaker is a dipole and therefore there is sound coming from both the front and the back of the speaker. How the wall behind the loudspeaker is treated or not treated is important. Generally speaking, Genesis loudspeakers prefer a live wall behind the loudspeaker and a dead wall behind the listener. By these terms we mean the amount of reflected sound. A typical wall of glass, brick, cement or drywall material is a *reflective* (or live) surface. A heavily curtained or sound proofed wall would be considered a *dead wall* or a non reflective wall. A normal thin curtain across a window causes only a small amount of absorption of the high frequencies.

2. Because the speaker is a dipole it is less sensitive to the side walls. However, it is a good idea to keep the speaker as far away from the side walls as is practical. With this in mind, it may be helpful to add some damping material or diffuser panels to the point of first reflection. This is a point on the side walls between the listener and the loudspeaker. It is where the sound from the loudspeaker first hits the side wall, then bounces to the listener. This reflection is undesirable because it is slightly delayed from the original sound. This point on the side wall can be easily determined with the help of a second person and a mirror.

Sitting in your listening position have an assistant hold a mirror up on the side wall. Ask your assistant to move the mirror along the wall until you (the listener) can see the tweeter. This is the point of first reflection. A diffuser (see your dealer), an absorptive material or even a piece of furniture can help break up this point of first reflection.

Mastering the refinements of the system

Fine tuning an audio or video system is an art that will take time and patience. It can be one of the more rewarding learning experiences you will have in the pursuit of music or video and their enjoyment.

One of the best pieces of advice we can offer is that you take advantage of the ear's ability to identify similarities in sound. This ability is useful in fine tuning your system because if every recording you listen to (or every video you watch) has a similarity of sound (too much or too little of a certain frequency for instance) then you can be fairly

certain that you have yet to perfect your setup. Keep at it and remember to enjoy your music and video as you work on perfecting your setup.

Loudspeaker impedance

The Genesis 700 has a nominal impedance of 4 ohms. When the switch on the back of the 700 is in the music position, the nominal impedance may briefly drop as low as 2 ohms on certain musical notes.

Genesis Servo Subwoofer Model 900

Genesis offers a servo subwoofer that is the perfect sonic mate for your model 700's. The Genesis 900 servo subwoofer is made for both audio and video applications and is superb for the point one effects channel in Dolby AC-3. For purely music application the 900 subwoofer will blend seamlessly with the Genesis 700's. For the ultimate in system performance, two Genesis 900 subwoofers (left and right) should be used.